

## NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

### ACCESS ROAD

(feet)  
CODE 560

#### DEFINITION

A travelway constructed as part of a conservation plan.

#### PURPOSE

- Provide a route for travel, for moving equipment, livestock, and supplies
- Provide access for proper operation and maintenance and management of conservation enterprises.

#### CONDITIONS WHERE PRACTICE APPLIES

Where roads are needed to provide access from a township, a county, or a state highway to a conservation enterprise or to provide travelways in a planned area.

#### DESIGN CRITERIA

Access roads shall be designed to serve the enterprise or planned use with the expected vehicular or equipment traffic. The type of vehicle or equipment, speed, loads, climatic, and other conditions under which vehicles and equipment are expected to operate need to be considered.

Visual resources and environmental values shall be considered in planning and designing the road system.

Access roads range from seldom used trails to all-weather roads heavily used by the public and built to very high standards. Some trails facilitate control of forest fires, are used for logging, serve as access to remote areas for recreation, or are used for maintenance of facilities.

Where general use by the public is anticipated, roads should be designed to

meet applicable federal, state, or local criteria.

Sound engineering practices shall be followed to insure that the road meets the requirements of its intended use.

**Location.** Roads shall be located to serve the purpose intended, to facilitate the control and disposal of water, to control or reduce erosion, to make the best use of topographic features, and to include scenic vistas where possible. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns. Roads should be located where they can be maintained and so water management problems are not created. To reduce pollution, roads should not be located near watercourses.

**Alinement.** The gradient, vertical and horizontal alinement shall be adapted to the intensity of use, mode of travel, and the level of development.

Grades normally should not exceed 10 percent except for short lengths, but maximum grades of 20 percent or more may be used if necessary for special uses.

**Width.** The minimum width of the roadbed is 14 feet for one-way traffic and 20 feet for two-way traffic. Single-lane logging or special-purpose roads have a minimum width of 10 feet, with greater widths at curves and turnouts. The two-way traffic width shall be increased approximately 4 feet for trailer traffic.

The minimum tread width is 10 feet for one-way traffic and 15 feet for two-way traffic.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version, contact the Natural Resources Conservation Service.
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## 560-2

The tread width for two-way traffic shall be increased approximately 4 feet for trailer traffic.

The minimum shoulder width is 2 feet on each side of the tread width.

Where turnouts are used, road width shall be increased to a minimum of 20 feet for a distance of 30 feet.

**Side slopes.** All cuts and fills shall have side slopes that are stable for the particular soil or soil materials.

Areas with geological conditions and soils subject to slides shall be avoided or treated to prevent slides.

**Drainage.** The type of drainage structure used will depend on the type of enterprise and runoff conditions. Culverts, bridges, or grade dips for water management shall be provided at all natural drainageways. The capacity and design shall be consistent with sound engineering principles and shall be adequate for the class of vehicle, type of road, development, or use.

Roadside ditches shall be adequate to provide surface drainage for the roadway and deep enough to serve as outlets for subsurface drainage. Channels shall be designed to be on stable grades or protected with structures or linings for stability.

Water breaks or bars may be used to control surface runoff on low-intensity use forest or similar roads.

**Surfacing.** Access roads shall be given a wearing course or surface treatment if required by traffic needs, climate, erosion control, or dust control. The type of treatment depends on local conditions, available materials, and the existing road base. If these factors or the volume of traffic is not a problem, no special treatment of the surface is required. Sound engineering practices shall be followed to insure that the road meets the requirements of its intended use and maintenance requirements are in line with operating budgets.

Unsurfaced roads may require controlled access to prevent damage or hazardous conditions during adverse climatic conditions.

Toxic or acid-forming materials shall not be used on roads. This should not be construed to prohibit use of chemicals for dust control and snow and ice removal.

**Traffic safety.** Passing lanes, turnouts, guardrails, signs, and other facilities as needed for safe traffic flow shall be provided. Traffic safety shall be a prime factor in selecting the angle and grade of the intersection with public highways. Preferably, the angles shall be not less than 85 degrees. The public highway shall be entered at the top of a hill or far enough from the top or a curve to provide visibility and a safe sight distance. The clear sight distance to each side shall not be less than 300 feet, if site conditions permit.

**Erosion control.** If soil and climatic conditions are favorable, roadbanks and disturbed areas shall be vegetated as soon as possible and skid trails, landings, logging, and similar roads shall be vegetated after harvesting or seasonal use is completed. If the use of vegetation is precluded and protection against erosion is needed, protection shall be provided by non-vegetative materials, such as gravel or other mulches.

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable without protection. If protection is needed, riprap or other similar materials shall be used.

**Vegetation.** Disturbed areas that are not part of the wearing surface shall be established to grass as soon as practicable after construction. If runoff, soil, climatic conditions preclude the use of vegetation and protection against erosion is needed, non-vegetative means, such as mulch or gravel, may be used. Seedbed preparation, seeding, fertilizing, and mulching shall be according to the Critical Area Planting (342) standard and specification. The vegetation shall be maintained and undesirable trees and brush controlled by chemical or mechanical means.

## CONSIDERATIONS

Watercourses and water quality shall be protected during and after construction by erosion control facilities and maintenance. Filter strips, water and sediment control

basins, and other conservation practices may be used and shall be maintained.

Dead end roads shall be provided with a turnaround. In some areas turnarounds may also be desirable for stream, lake, recreation, or other access purposes.

Use of geotextile material may be considered in order to improve the stability and maintenance of the road surface. Refer to conservation practice specification Geotextile (753) or equivalent for material and installation recommendations.

## **PLANS AND SPECIFICATIONS**

Plans and specifications for constructing access roads shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

## **OPERATION AND MAINTENANCE**

A written operation and maintenance plan shall be developed with input of the owner-operator. Some items to be included in the plan are gully development, reduction in surface material thickness, condition of subbase, and any problems with road ditches or drainage.

**NATURAL RESOURCES CONSERVATION SERVICE  
MISSOURI CONSTRUCTION SPECIFICATION**

**FOR  
ACCESS ROAD  
(560)**

Construction operations shall be carried out in such a manner and sequence that erosion and air and water pollution will be minimized and held within legal limits. A land disturbance permit from the Missouri Department of Natural Resources may be needed if the disturbed area is greater than five acres in size.

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used.

Construction operations shall be carried out in a manner that erosion and air and water pollution are minimized and held within legal limitations. The completed job shall present a workmanlike finish. Construction shall be according to the following requirements as specified for the job.

All trees, stumps, roots, brush, weeds, and other objectionable material shall be removed from the area that will be required for side approaches and inlet and outlet ditches. All unsuitable materials shall be excavated from the roadbed areas.

The roadbed shall be graded to the required elevations.

Approved materials will be used to make the required fills. That portion of the roadbed on which subgrade is to be prepared shall be loosened to a depth of six inches and all stones, roots and other objectionable material removed and disposed of. The subgrade shall then be compacted to the required density.

Aggregate for the subbase shall be clean and free from deleterious substances. It shall be of such quality that it will bind readily to form a stable subbase to the lines, grades, and cross section shown on the plans.

Placement of the surface course shall be in accordance with sound highway construction practice for the surface material used.

Additional details: \_\_\_\_\_

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